

Listing of Claims:

1. – 6. (Canceled)

7. (New) A method for communication between a first computer terminal of a private Internet Protocol (IP) network and a second computer terminal of a public IP network, the method comprising:

initializing a connection, by a mediation system which is associated with the first computer terminal in the private IP network, to a dedicated service port of a control server in the public IP network;

establishing, by the mediation system, a communications tunnel between the mediation system and the dedicated service port of the control server, through a network boundary equipment, to make an IP interface of the mediation system available to the second computer terminal via the control server;

transmitting information, by the mediation system, to the control server relating to the configuration of the mediation system in the private network; and

performing an operation, by the control server, on the mediation system via the communications tunnel established through the network boundary equipment.

8. (New) The method of claim 7, wherein the operation is opening a port of the mediation system, the operation comprising:

receiving, by the mediation system, from the control server, an open port request comprising an IP address of the mediation system and a port number of the mediation system to be opened; and

sending, by the mediation system, to the control server, an identifier of the opened port and an assigned port number of the opened port.

9. (New) The method of claim 7, wherein the operation is redirecting a port of the mediation system, the operation comprising:

receiving, by the mediation system, from the control server, a redirect request comprising an IP address of the mediation system and a port number of the mediation system to be redirected; and

sending, by the mediation system, to the control server, an identifier of the redirected port of the mediation system and an assigned port number of the redirected port of the mediation system,

wherein packets arriving at the redirected port of the mediation system are relayed to the dedicated service port of the control server using user datagram protocol (UDP).

10. (New) The method of claim 7, wherein the operation is connecting a port of the mediation system to a port of the private network, the operation comprising:

receiving, by the mediation system, from the control server, a connect port request comprising an identifier of a previously-opened port of the mediation system and an IP address and port number to which connection is requested in the private network.

11. (New) The method of claim 7, wherein the operation is making a port of the mediation system a server port, the operation comprising:

receiving, by the mediation system, from the control server, a make server request comprising an identifier of a previously-opened port of the mediation system for which configuration as a server port is requested.

12. (New) The method of claim 7, wherein the operation is closing a port of the mediation system, the operation comprising:

receiving, by the mediation system, from the control server, a close port request comprising an identifier of a previously-opened port of the mediation system for which closing is requested.

13. (New) The method of claim 7, wherein the operation is performing packet relay at a port of the mediation system, the operation comprising:

receiving, by the mediation system, from the control server, a packet relay request comprising an identifier of a previously-opened port of the mediation system and an IP address and port number to which forwarding is requested in the private network.

14. (New) The method of claim 7, wherein the operation is performing packet relay at a port of the mediation system, the operation comprising:

receiving, by the mediation system, a packet from the private network at a previously-opened port of the mediation system; and

sending, by the mediation system, a packet relay statement comprising an identifier of the previously-opened receiving port of the mediation system, an IP address and a port number of a sending port of the private network, and the received packet.

15. (New) A system for communication between a first computer terminal of a private Internet Protocol (IP) network and a second computer terminal of a public IP network, the private IP network comprising network boundary equipment, the system comprising:

a control server which is associated with the second computer terminal in the public IP network, the control server being configured to perform an operation on the mediation system via a communications tunnel established through the network boundary equipment; and

a mediation system which is associated with the first computer terminal in the private IP network, and which is configured to initialize a connection to a dedicated service port of the control server in the public IP network,

wherein the mediation system is configured to establish the communications tunnel between the mediation system and the dedicated service port of the control server, through the network boundary equipment, to make an IP interface of the mediation system available to the second computer terminal via the control server, and the mediation system is configured to transmit information to the control server relating to the configuration of the mediation system in the private network.

16. (New) The system of claim 15, wherein the operation is opening a port of the mediation system, and wherein the mediation system is configured to:

receive from the control server, an open port request comprising an IP address of the mediation system and a port number of the mediation system to be opened; and

send to the control server, an identifier of the opened port and an assigned port number of the opened port.

17. (New) The system of claim 15, wherein the operation performing packet relay at a port of the mediation system, and wherein the mediation system is configured to receive from the control server a packet relay request comprising an identifier of a previously-opened port of the mediation system and an IP address and port number to which forwarding is requested in the private network.

18. (New) The system of claim 15, wherein the operation is performing packet relay at a port of the mediation system, and wherein the mediation system is configured to:

receive a packet from the private network at a previously-opened port of the mediation system; and

send a packet relay statement comprising an identifier of the previously-opened receiving port of the mediation system, an IP address and a port number of a sending port of the private network, and the received packet.